

CLAIM AMENDMENTS**Claim 1 (original).**

A woodworking machine comprising:
a support structure having a cutting zone;
a cutting tool supported by the support structure and adapted to move at least partially into the cutting zone to cut a workpiece;
a motor adapted to drive the cutting tool;
a detection system adapted to detect contact between a person and the cutting tool; and
a reaction system adapted to stop motion of the cutting tool into the cutting zone upon detection of contact between a person and the cutting tool by the detection system.

Claim 2 (original):

The machine of claim 1, where the motor rotates the cutting tool as the cutting tool moves at least partially into the cutting zone, and where the reaction system is adapted to stop the rotation of the cutting tool.

Claim 3 (original):

The machine of claim 2, where the reaction system includes a first brake mechanism adapted to stop the movement of the cutting tool into the cutting zone, and a second brake mechanism adapted to stop the rotation of the cutting tool.

Claim 4 (original):

The machine of claim 1, further comprising operative structure adapted to couple the cutting tool to the support structure, where the operative structure is selectively movable relative to the support structure to move the cutting tool into the cutting zone, and where the reaction system is adapted to stop movement of the operative structure relative to the support structure upon detection of contact between a person and the cutting tool by the detection system.

Claim 5 (withdrawn):

The machine of claim 4, where the reaction system includes a pawl mounted on the support structure and selectively movable into contact with the operative structure to grip the operative structure and prevent relative movement between the operative structure and the support structure.

Claim 6 (withdrawn):

The machine of claim 4, where the reaction system includes a pawl mounted on the operative structure and selectively movable into contact with the support structure to grip the support structure and prevent relative movement between the support structure and the operative structure.

Claim 7 (original):

A woodworking machine comprising:
a cutter adapted to move translationally relative to a workpiece to be cut;
a detection system adapted to detect contact between a person and the cutter; and
a reaction system adapted to interrupt the translational movement of the cutter upon the detection of contact between the person and the cutter by the detection system.

Claim 8 (withdrawn):

The woodworking machine of claim 7, where the reaction system is adapted to interrupt the translational movement of the cutter by stopping that movement.

Claim 9 (original):

The woodworking machine of claim 7, where the cutter is adapted to rotate, and further comprising a brake system to stop the rotation of the cutter upon the detection of contact between the person and the cutter by the detection system

Claims 10-16 (canceled).

Claim 17 (new):

A woodworking machine comprising:

a base configured to rest on a generally horizontal surface to support the machine during operation;

a work surface supported by the base above the generally horizontal surface on which a workpiece may be cut;

a work zone adjacent the work surface;

a blade adapted to move into the work zone to cut the workpiece;

a motor to drive the blade;

a detection system adapted to detect contact between a person and the blade; and

a reaction system adapted to limit movement of the blade into the work zone upon the detection of the contact.

Claim 18 (new):

The woodworking machine of claim 17, where the woodworking machine is a miter saw, and further comprising a support arm moveable relative to the base, where the blade is mounted for rotation on the support arm, and where the reaction system includes a pawl to engage the blade to limit the movement of the blade into the work zone when the pawl engages the blade.

Claim 19 (new):

The miter saw of claim 18, further comprising a pivot joint between the support arm and base and adapted to allow the support arm to pivot relative to the base, where the blade has a rotational axis, where the blade has a front portion defined as that portion beyond the rotational axis away from the pivot joint, and where the pawl is adapted to engage the blade at a position on the front portion of the blade.

Claim 20 (new):

The woodworking machine of claim 1, where the machine is a radial arm saw and the cutting tool is a circular blade.

Claim 21 (new):

The radial arm saw of claim 21, where the support structure includes an arm and a bracket configured to slide along the arm, and where the reaction system includes a wedge assembly configured to interrupt the sliding of the bracket along the arm.

Claim 22 (new):

The radial arm saw of claim 21, where the support structure includes an arm and a bracket configured to slide along the arm, and where the reaction system includes a lockable spool assembly configured to interrupt the sliding of the bracket along the arm.

Claim 23 (new):

The woodworking machine of claim 1, where the machine is a miter saw and the cutting tool is a circular blade.

Claim 24 (new):

The miter saw of claim 23, where the support structure includes a base to hold a workpiece to be cut and a swing arm pivotally coupled to the base, where the blade is supported on the swing arm, and where the reaction system includes a piston and cylinder to stop the motion of the blade into the cutting zone upon detection of contact by the detection system.

Claim 25 (new):

The miter saw of claim 23, where the support structure includes a base to hold a workpiece to be cut and a swing arm pivotally coupled to the base, where the blade is supported on the swing arm, and where the reaction system includes a cam surface and pawl to stop the motion of the blade into the cutting zone upon detection of contact by the detection system.

Claim 26 (new):

The woodworking machine of claim 7, where the machine is a miter saw and the cutting tool is a circular blade, and further comprising:

a base configured to support a workpiece to be cut;

a swing arm positioned above the base and adapted to move toward a workpiece supported by the base;

a blade mounted to move with the swing arm to contact the workpiece when the swing arm moves toward the workpiece; and

a handle associated with the swing arm and adapted so that a user may move the swing arm and blade toward the workpiece;

where the reaction system interrupts the movement of the blade and swing arm toward the workpiece upon the detection of contact between the person and the blade by the detection system.

Claim 27 (new):

The miter saw of claim 26, further comprising a piston/cylinder to limit the speed the swing arm can move.

Claim 28 (new):

The miter saw of claim 26, where the reaction system includes a cam portion and a pawl to interrupt the movement of the blade and swing arm into toward the workpiece.